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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,313	02/06/2004	Y.S. Fung	V0690.0012/P012	7424

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EXAMINER

MAYEKAR, KISHOR

ART UNIT	PAPER NUMBER
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1795

MAIL DATE	DELIVERY MODE
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02/19/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/772,313	Applicant(s) FUNG ET AL.	
	Examiner Kishor Mayekar	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1 and 3-11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Independent claim now adds the limitation that the coating composition is essentially free of organic solvent. The limitation is equivalent that there is no organic solvent in the coating composition. However, as it is disclosed in the specification at page 3 "a great reduction in the use of organic co-solvent, generally to less than about 1%", and at page 5 "[o]rganic solvent should be essentially absent (i.e., less than about 1%"), the specification fails to enable to the limitation "essentially free of organic solvent".

Art Unit: 1795

3. Claims 1 and 3-11 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the coating composition with an organic solvent of less than about 1%, does not reasonably provide enablement for the coating composition containing no organic solvent. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims. The above claims recite that the coating composition is essentially free of organic solvent. Because of the breadth of the claims, the above claimed subject matter can be interpreted as that there is no organic solvent in the coating composition, for example. And the specification does not enabling such an interpretation.

4. Claims 1 and 3-11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The independent claim recites the limitation of the coating composition being essentially free of organic solvent, which is equated to no organic solvent in the coating composition. There is no support for the limitation as now added to the independent claim 1. It's disclosed in page 5 of the specification "[o]rganic solvent should be essentially absent (i.e., less than about 1%)". That is when the organic

Art Unit: 1795

solvent is less than 1%, the organic solvent in the coating composition is considered as essentially absent.

Claim Rejections - 35 USC § 103

5. Claims 1 and 3-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Antonelli et al. (US 5,667,894) in view of Harris et al. (US 5,672,432) and/or Uchidoi et al. (US 7094324 B2), all the references cited in the last Office action. Antonelli's invention is directed to a cathodic electrocoating composition containing methane sulfonic acid as a neutralizing agent and a coating method thereof. Antonelli discloses that the composition is an aqueous dispersion having a binder of an epoxy-amine adduct with a binder phase have a particle size about 0.02 to 10 microns, preferably of less than 1 micron (col. 4, lines 51-65), and the composition has a pH preferably of about 5.5 to 8 (col. 2, lines 30-36). In Table I, Antonelli further discloses that the particle size of the binder emulsion between 91 nm to 169 nm and the various conductivity of the composition from 1738 to 2540 microsiemens. The shown conductivity can be interpreted as per one centimeter. Further, since Antonelli discloses in the preparation of an electrocoating bath A the evaporation of all of the organic solvent present in the emulsion, it is assumed that the organic solvent is not present (essentially absent). The difference between Antonelli and the above claims is the overlapping of the recited pH range and the recited conductivity range.

As to the former, it has been held that the disclosure in the prior art of any value within the claimed range is an anticipation of that range. And a prima facie case of obviousness exists in the case where the claimed range overlaps range disclosed by the prior art, *In re Wertheim* 191 USPQ 90.

As to the latter, Harris teaches in the abstract and col. 9, lines 11-19 a cathodic electrocoating composition having a binder of an epoxy-amine adduct with an electroconductivity from 800 to 3000 micromhos (or microsiemens). Harris also teaches in a synthesis 4 that the particle size of the binder phase is 45 nm and in synthesis 5 the composition with a pH of 7.7 and the particle size of the binder phase of 120 nm. Uchidoi teaches in the abstract a cathodic electrocoating composition having a binder of an epoxy-amine adduct with an electroconductivity from 1000 to 2500 microsiemens/cm. The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Antonelli as shown by Harris and/or Uchidoi because it has been settled that proper adjustment of a known effective variable of a known or obvious process is within the capabilities of one having ordinary skill in the art. *In re Aller* 105 USPQ 233; *In re Boesch* 205 USPQ 215. The optimization is also applied to claim 7 since the thickness of the electrodeposited coating is a function of the voltage, time and distance between the electrodes.

As to the subject matter of claim 4, Antonelli discloses that the composition usually contains a pigment with the ration of pigment to binder (col. 4, lines 13-15 and lines

Art Unit: 1795

30-34). Harris teaches the pigment in the composition between 0 to 35 wt% (col. 7, lines 49-51). Uchidoi teaches the composition contains pigment or no pigment (col. 7, lines 26-32). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the references' teachings because the selection of providing pigment or no pigment in the composition would have been within the level of ordinary skill in the art.

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Antonelli '894 as modified by Harris '432 and/or Uchidoi '324 as applied to claims 1-6 and 8-11 above, and further in view of Kerr et al. (US 5,744,531). Antonelli discloses in Table I the operating voltage. Kerr, another reference cited in the last Office action, teaches the use of a voltage as low as one volt for the electrodeposition of the composition (col. 12, lines 52-57). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the references' teachings as shown in Kerr because the selection of a voltage for the electrodeposition would have been within the level of ordinary skill in the art.

Response to Arguments

7. Applicant's arguments filed 6 December 2007 have been fully considered but they are not persuasive.

First, to the reference to a synthesis 5 in Antonelli, it is clear, though a typo error made by the examiner to the reference, that the reference is made to Harris when addressing Harris' teachings.

In response to Applicant's argument that "the reference in Antonelli to a basic pH of up to 8, as recited in column 2, at line 36, was a clear typographic error", the examiner finds this is unpersuasive. It's because, as Antonelli discloses there a cathodic electrocoating composition with a pH range of about 5.5-8; in col. 5, lines 21-26 the neutralization with an acid; and claims in claim 2 the same pH range and as Harris teaches a cathodic electrocoating composition with a pH of 7.7 in the synthesis 5 from the neutralization with an acid, the combination of the references would lead one skilled in the art that the pH range of Antonelli is not a typographic error.

In response to the argument on the organic coalescing solvent as disclosed in the references, since Antonelli discloses in the preparation of an electrocoating bath **A the evaporation of all of the organic solvent present in the emulsion** where it is reasonably assumed that the organic solvent is not present (essentially absent) in the cathodic electrocoating composition, Harris teaches the cathodic coating composition **may include** organic coalescing solvent in the amount between about 0 and 15 percent by weight (col. 7, lines 29-48), and Uchidoi teaches the use of **low amount of VOC or organic solvent** (col. 10, lines 5-54), it appears that the reference teaches the minimal or optional use of organic coalescent solvent: by evaporation of all organic solvent (i.e. in Antonelli), the

Art Unit: 1795

optional use of organic solvent (i.e. in Harris), and the use of organic solvent in an amount of 0.2 to 0.5% by weight to prevent adverse effects to the environment (i.e. in Uchidoi).

As to the argument to the rejection of claim 7, the rejection stands because of the maintaining of the rejection of claims based on the combination of references (Antonelli, Harris and/or Uchidoi).

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kishor Mayekar whose telephone number is (571) 272-

Art Unit: 1795

1339. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kishor Mayekar/

Primary Examiner, Art Unit 1795